RESTORATION AND SUSTAINABLE MANAGEMENT OF HISTORICAL WOOD PASTURES IN SLOVAKIA




1. Overgrowing wood pasture in the Silická planina 2.Managed wood-pasture near the village of Teplý Vrch 3. Remnants of overgrowing wood pasture near Gemerská Hôrka 4. A part of the wood pasture near Hontianske Moravce

WHAT AND WHY

Wood Pastures in Slovakia

Historical wood pastures represent an important and deeply rooted landscape element in Slovakia. These unique ecosystems have played a key role in the cultural, economic, and environmental history of the country. Within these systems, agricultural and forest components are combined to create synergistic relationships that can contribute to ecological, economic, and social sustainability. However, due to increasing pressure from modernization and changes in agriculture, these ecosystems are under threat, leading to the loss of their value and biodiversity. The current state of wood-pastures in Slovakia requires detailed analysis and identification.

HOW THE CHALLENGE IS ADDRESSED

Management and Restoration of Wood Pastures

The management of wood pastures involves a combination of traditional and modern approaches that ensure their sustainability and the conservation of biodiversity. Key practices include regular mowing or grazing of the understory vegetation, which promotes species diversity and prevents the regeneration of woody plants. Controlling invasive species is also essential. The involvement of local communities and landowners is crucial for the successful maintenance of these ecosystems, including education and support for traditional farming practices.

In addition to active management of preserved sites, it is also important to focus on the identification and restoration of wood pastures that have been affected by natural succession due to abandonment or agricultural intensification. Many of these areas are overgrown with pioneer woody species, yet they still retain the potential to restore their original ecological functions. By combining historical maps, field surveys, and modern tools such as LiDAR, it is possible to identify these sites, assess their condition, and propose appropriate restoration measures. The restoration of these areas represents a key step toward enhancing ecological connectivity, protecting biodiversity, and maintaining the cultural landscape.

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Keywords: wood pastures, traditional management, biodiversity

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ADVANTAGES

Benefits of the Restoration and Proper Management of Wood Pastures

The restoration and sustainable management of wood pastures bring numerous benefits that go beyond the individual sites and have a positive impact on the broader landscape and society.

From an ecological perspective, these systems support high biodiversity by providing habitat for rare and endangered species of plants, invertebrates, birds, and bats that depend on the mosaic structure and dynamics of wood-pasture environments. Proper management maintains open stand structures, preventing succession and the loss of species-rich habitats. Additionally, these ecosystems contribute to water retention in the landscape, carbon sequestration, and improved microclimatic conditions.

From an economic standpoint, wood pastures offer opportunities for sustainable grazing, the production of high-quality meat or dairy products from extensively raised animals, as well as the cultivation of herbs and other forest products. In some regions, there is also potential for the development of ecotourism, agritourism, or support through agri-environmental subsidy schemes.

From a cultural and historical perspective, wood pastures are an important part of the landscape heritage. Their restoration and preservation help maintain rural cultural identity, traditional land-use practices, and historical knowledge. These areas also hold value for recreation and the aesthetic appreciation of the landscape.

Overall, the restoration and proper management of wood pastures represent an effective tool for supporting multifunctional landscape use, connecting natural values with practical and societal needs.

HIGHLIGHTS:

- **Restoration of wood pastures supports biodiversity and prevents landscape degradation.**
- **Proper management enables sustainable use of natural resources in harmony with nature conservation.**
- **Preservation of these systems contributes to the protection of cultural heritage and traditional land-use practices.**

Wood pasture near Katarínska Huta

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